

Table 1. Site characteristics and field activities

Parameter/ activity by site (S)	2021				2022			
	S1	S2	S3	S4	S5	S6	S7	S8
Location								
Lat.	Palmyra 42.898889	Palmyra (W) 42.843056	Palmyra 42.858611	East Troy 42.8116667	Palmyra 42.90976	Palmyra 42.91247	Palmyra 42.90789	East Troy 42.81422
Long.	-88.590833	-88.610833	-88.5725	-88.4875	-88.56817	-88.57476	-88.58557	-88.47873
Rye row width (in)	7.5	10	10	7.5	10	10	7.5	7.5
Soil								
	YaA	MuB	FsB	FsA	JuB	KeB	KeB	FsA
pH	6.9	6.9	6.3	6.9	7.0	7.1	7.0	6.0
OM (%)	1.9	1.3	1.4	1.9	1.9	1.5	1.5	1.9
P (ppm)	89	74	55	41	64	139	94	57
K (ppm)	115	92	68	74	100	143	135	90
S (ppm)	2.4	2.6	3.5	2.8	4.1	3.7	3.2	4.5
Previous Crop								
Hybrid	Pioneer P0306Q	Pioneer 0157RR	Agri-gold 6267vt2	O'Brien OB1105	Agri-gold A621-77VT2	LG Seeds LG5499VT2	Pioneer P0306Q	Renk RK710DGV2P
RM	103	101	102	103	91	102	103	106
Planting date	5/7/20	5/3/20	4/26/20	5/6/20	4/27/21	4/25/21	4/28/21	5/2/21
Harvest date	10/26/20	10/25/20	10/25/20	11/6/20	10/3/21	10/10/21	10/15/21	10/22/21
Total N (lb./a)	133	146	147	144	155	136	156	163
Yield (bu./a)	212	169	143	167	160	174	155	144
Cover crop								
Rye planting	10/27/20	10/24/20	10/24/20	11/8/20	10/10/21	10/27/21	10/18/21	11/7/21
Rye sampling 1	4/22	4/24	4/23	4/24	4/28	4/28	4/28	5/2
Rye termination 1 (preemergence ⁽¹⁾)	4/27	4/27	4/27	4/27	5/7	5/7	5/7	5/7
Rye sampling 2	6/2	6/3	6/3	6/6	6/10	6/10	6/10	6/11
Rye termination 2 (postemergence ⁽²⁾)	6/4	6/4	6/4	6/7	6/11	6/11	6/11	6/11
Soybean								
Variety	Pioneer P22T86E	Brevant B210EE	Stein 19EA32	Renk G2350E	Golden Harvest GH1802E3	Brevant B210EE	Pioneer P22T86E	Renk G2550E
Planting date	4/22	5/1	5/2	5/12	5/15	5/14	5/8	5/17
Seeding rate (seeds/a, x1000)	141	129	125	180	130	132	146	148
Row width (in)	15	30	30	30	30	30	15	30
Preemergence application	4/27	4/27	4/27	4/27	5/7	5/7	5/7	5/19
Weed density 1 (pretreatment)	n/a	6/17	6/17	6/17	6/29	6/29	6/29	6/29
Postemergence application	n/a	6/30	6/30	6/25	6/29	6/29	6/29	6/29
Weed density 2 (preharvest)	n/a	10/3	9/23	9/30	9/30	9/30	9/30	9/30
Harvest	n/a	10/18	10/17	9/30	10/2	10/3	10/10	10/10

⁽¹⁾ Preemergence, postemergence designations reference soybean.⁽²⁾ Terminated at anthesis.